

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: the blades of the gripping members being coarsely serrated, as required by claim 9, are not disclosed.

Appropriate correction is required.

Claim Objections

2. Claim 10 is objected to because of the following informalities: “wherein two gripping means” should be --wherein the two gripping means—in order to properly refer to the gripping means previously set forth, see line 2; and “the apparatus” should be --the stump grubber-- since an apparatus was not previously set forth. Appropriate correction is required.

3. Claim 13 is objected to because of the following informalities: “the frame” should be --a frame—since it was not previously set forth, see line 5.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 13-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites "a method for grubbing stumps" but does not clearly set forth the steps. Applicant is reminded that in order to claim a method, the steps must be set forth in gerund form.

Claim 18 recites "severing of the roots is carried out using only the stump grubber's own power means," see lines 2-3, is considered unclear since the claim depends from claim 13 which already claims that "the severing of the roots is carried out using only the hydraulic pressure supplied from the work machine," see the last two lines of claim 13. Claim 18 appears to claim the same limitation as claim 13, therefore, claim 18 does not appear to set forth any further limitations.

NOTE: Claim 13 will be examined as best understood regarding what is considered a step. Claim 18 will be examined as though the limitations are the same respective limitations set forth in claim 13.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Peters (US 4,481,989).

Regarding claim 20, Peters discloses a method capable of prevention of fungus disease, comprising removing a stump 22 and the roots 198 of the stump for a distance

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around the stump from the ground by making a mainly circular incision appearing to be 1000-4000mm substantially around the stump directed vertically downwards into the ground to a certain depth and, simultaneously, lifting the stump mainly vertically upwards by gripping means 14, 15, see col. 6, ln. 46- col. 7, ln. 33, at four points of cutting blades 202, 204, as seen in fig. 7.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 5-12 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters (US 4,481,989) in view of Nicholson (US 4,517,755).

Regarding claim 1, Peters discloses a stump grubber 10 comprising a frame 14 incorporating coupling means 18, 20 to couple the stump grubber to a work machine 12, and, supported on the frame, two gripping means 44, 70, 202, 204 to grip a stump, arranged on opposite sides of the stump grubber to pivot around mainly parallel pivot axes, the gripping means 202, 204 comprising 4 blades, see fig. 9, arranged to penetrate into the stump, whereby the blades of one gripping means are arranged along a distanced in the direction of its pivoting axis, which distance appears no less than 400mm, a cutting blade 150, at least mainly cylindrical in form, arranged to cut downwards to sever roots 198 around the stump 22, the cylindrical cutting blade having

a diameter which is sufficiently large to allow the gripping means to operate inside the cutting blade, and power means 56, 84, 102, 104 to move the gripping means and the cutting blade relative to each other in at least a substantially vertical direction so that the cylindrical cutting blade is arranged to be downwardly movable relative to the gripping means, and the gripping means are arranged to be upwardly movable relative to the cylindrical cutting blade in order to lift the stump from the ground, see figs. 1, 2, and 6.

Peters does not disclose the gripping means comprising 5 to 20 blades.

However, the number of blades of the gripping member is considered an obvious design choice which would allow better grip with an increasing number of blades. Nicholson discloses an apparatus for clearing undergrowth and timber having a gripping means with 6 blades 11, 22, see figure 2.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the stump grubber of Peters with multiple blades as taught by Nicholson to better grip a tree stump thereby allowing secure removal.

Regarding claim 2, the combination of Peters and Nicholson discloses the stump grubber wherein the cylindrical cutting blade 150 is arranged to be at least mainly immovable vertically relative to the frame 14, see Peters, fig. 1.

Regarding claim 3, the combination of Peters and Nicholson discloses the stump grubber wherein the gripping means 44, 70 are arranged to be at least mainly immovable vertically relative to the frame 14, see Peters, fig. 1.

Regarding claim 5, the combination of Peters and Nicholson discloses the stump grubber wherein the power means 58, 84 are attached to the frame 14 by means of a

joint 48, 86 and to the gripping means 44, 70 by means of a joint 62, 90 that allows the power means to move relative to the frame and the gripping means in a direction other than the direction of the force generated by the power means, see Peters, fig. 2.

Regarding claim 6, the combination of Peters and Nicholson discloses the stump grubber further comprising pivoting means 50, 74, 56, 84 to pivot the gripping means 44, 70 relative to the frame 14 between at least two positions, namely an open position, where the gripping means 44, 70 are intended to be out of contact with the stump 22, and a closed position, shown in phantom in fig. 2, where the gripping means are intended to be in contact with the stump and to have a grip on the stump 22, see Peters, fig. 2.

Regarding claim 7, the combination of Peters and Nicholson discloses the stump grubber wherein the pivoting means include hinge members 50, 74 and power members 56, 84 to pivot the gripping means 44, 70 relative to the frame 14, see Peters, fig. 2.

Regarding claim 8, the combination of Peters and Nicholson discloses the stump grubber wherein the blades 202, 204 are formed to have cutting and slitting inner surface in order to split the stump, see Peters, fig. 9 and col. 7, ll. 53-63.

Regarding claim 9, the combination of Peters and Nicholson discloses the stump grubber wherein the blades 11, 22 of the gripping means are coarsely serrated as disclosed by Applicant, see Nicholson, fig. 2.

Regarding claim 10, the combination of Peters and Nicholson discloses the stump grubber wherein the two gripping means 44, 70 are arranged at least almost on opposite sides of the stump grubber to pivot around parallel pivot axes defined by joints

50, 74 symmetrically so that the blades are arranged to be aligned in the closed position, see Peters, fig. 6.

Regarding claim 11, the combination of Peters and Nicholson discloses the stump grubber wherein the two gripping means 44, 70 both comprise no less than three blades 11, 22 arranged to be immovable relative to one another, see Nicholson, fig. 2.

Regarding claims 21 and 12, the combination of Peters and Nicholson discloses the stump grubber wherein the blades 11, 22 of one gripping means 44, 70 are arranged along a distanced, appearing measured in the direction of their pivot axis, of no less than 800 mm, which is no less than 600mm , see Nicholson, fig. 2.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Peters in view of Nicholson as applied to claim 1 above, and further in view of Wildey (US 2004/0216809).

Regarding claim 4, the combination of Peters and Nicholson discloses the stump grubber having a cylindrical cutting blade but does not disclose the diameter of the cutting blade being 1000-4000mm.

Wildey teaches a similar stump grubber having a cylindrical cutting blade 70 wherein the diameter is between 1000 to 4000 mm, see par. [0023], ll. 13-14 and par. [0028], ll. 10-13.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cylindrical cutting blade of the combination of Peters and

Nicholson with a diameter of 1000 to 4000 mm as taught by Wildey in order to adequately accommodate a range of tree stumps having different diameters.

11. Claims 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Peters in view of Nicholson and Hill et al. (US 5,441,090).

Regarding claims 13 and 18, Peters discloses a method for grubbing stumps with a stump grubber 10 coupled to a lifting means 12 of a work machine, with gripping means 44, 70 and a cutting blade 150, at least mainly cylindrical in form, supported on a frame 14 of the stump grubber, and in which method the stump grubber is positioned above the stump with the help of the lifting means of the work machine, see col. 5, ll. 50-51; two gripping means 44, 70, 202, 204 on opposite sides of the stump grubber are pivoted around mainly parallel pivot axes, see col. 5, ll. 56-62 and col. 7, ll. 53-63; the stump is firmly gripped by the gripping means at the side of the stump 22 by forcing blades 52, 78 into the stump, see col. 6, ll. 21-45; the at least mainly cylindrical cutting blade 150 is positioned beside the stump 22 around the gripping means 44, 70 in at least a substantially vertical position, see fig. 1; the stump 22 is lifting upwards and the roots growing out of the stump are severed by moving the cylindrical cutting blade 150 and gripping means 44, 70 relative to each other so that the cutting blade 150 is moved downwards relative to the gripping means 44, 70 and the gripping means 44, 70 are moved upwards relative to the cylindrical cutting blade 150, see col. 6, ln. 46- col. 7, ln. 33.

Peters does not disclose the work machine supplying the hydraulic pressure or gripping the stump at 5 to 20 points.

However, the number of blades of the gripping member is considered an obvious design choice which would allow better grip with an increasing number of blades.

Nicholson discloses an apparatus for clearing undergrowth and timber having a gripping means with 6 blades 11, 22, see figure 2.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the stump grubber of Peters with multiple blades as taught by Nicholson to better grip a tree stump thereby allowing secure removal.

Hill teaches a similar method for grubbing stumps with a stump grubber having a work machine supplying the only hydraulic pressure, also considered a power means, to the stump grubber, see col. 3, ll. 13-20.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the method of grubbing stumps with a stump grubber of Peters with a hydraulic pressure supplied by the work machine as taught by Hill in order to efficiently operate the work machine and the stump grubber.

Regarding claim 14, the combination of Peters, Nicholson and Hill discloses the method wherein the cylindrical cutting blade 150 is kept at least mainly immovable in the vertical direction relative to the frame 14, see Peters, fig. 1.

Regarding claim 15, the combination of Peters, Nicholson and Hill discloses the method wherein the gripping means 44, 70, 202, 204 are kept at least mainly immovable in the vertical direction relative to the frame 14, see Peters, fig. 1.

Regarding claim 16, the combination of Peters, Nicholson and Hill discloses the method wherein the stump 22 is supported against the stump grubber, also from above, by splines 24, 26, 28, 30, see Peters, fig. 1.

Regarding claim 17, the combination of Peters, Nicholson and Hill discloses the method wherein the blades of gripping means 202, 204 incorporate cutting blades, and that in this method, the gripping means 202, 204 are pressed so deep into the stump at its side that the stump is at least partially split, see Peters, fig. 9 and col. 7, ll. 53-63.

Response to Arguments

12. Applicant's arguments with respect to claims 1-18 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant amended the claims by adding a circular or cylindrical cutting blade and hydraulic pressure and argues that none of the references teaches this blade. Peters is now applied, as seen above in this action, which teaches a cylindrical blade; and Hill is applied which teaches the hydraulic pressure.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAI T. NGUYEN whose telephone number is (571)272-7662. The examiner can normally be reached on Monday-Friday 8:00a-5:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Thomas B Will/
Supervisory Patent Examiner
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